ZAKUMBAYEVA, G.D.; SOKOL'SKIY, D.V.

Effect of potassium iodide on the catalytic hydrogenation of some organic compounds. Izv.vys.ucheb.zav.; khim.i khim.tekh. 2 no.3:340-344 '59. (MIRA 13:8)

1. Institut khimicheskikh nauk AN KazSSR i Kazakhskiy gosudarstvennyy universitet imeni S.M.Kirova.
(Potassium iodide) (Hydrogenation)

SOKOL'SKIY, D.V., akademik; ZAKUMBAYEVA, G.D.

Effect of alkali metal halides on the mechanism of catalytic hydrogenation of cyclohexane. Dokl. AN SSSR 124 no.4:880-882 F '59. (MIRA 12:1)

1.AN KazSSR (for Sokol'skiy). 2. Institut khimicheskikh nauk Akademii nauk KazSSR.
(Alkali metal halides) (Cyclohexane)
(Hydrogenation)

ZAKUMBAYEVA, G.D.; SOKOL'SKIY, D.V.

Effect of alkali metal halides on the hydrogenation rate of cyclohexene and mesityl oxide over palladium black. Trudy Inst.khim.nauk AN Kazakh.SSR 7:3-12 '61. (MIRA 15:8)
(Alkali metal halides) (Hydrogenation)
(Cyclohexene) (Penetenone)

SOKOL'SKIY, D.V., akademik, glav. red.; POPOVA, N.M., kand. khim. nauk, red.; ZAKUMBAYEVA, G.D., kand. khim. nauk, red.; BULAVKINA, L.A., kand.khim. nauk, red.; GREBENKINA, G.F., kand. khim. nauk, red.; DZHARDAMALIYEVA, K.K., kand. khim. nauk, red.; GLAZYRINA, D.M., red.; ROROKINA, Z.P., tekhn.red.

[Catalytic reactions in the liquid phase] Kataliticheskie reaktsii v zhidkoi faze; trudy Vsesoiuznoi konferentsii. Alma-Ata, Izd-vo AN Kaz.SSR, 1963. 459 p. (MIRA 16:12)

1. Vsesoyuznaya konferentsiya po kataliticheskim reaktsiyam v zhidkoy faze, Alma-Ata, 1962. 2. Kazakhskiy tekhnologicheskiy institut i Institut khimicheskikh nauk AN KazSSR (for Sokol'skiy).

(Catalysis)

ZAKARINA, N.A.; ZAKUMBAYEVA, G.D.; SOKOL'SKIY, D.V., akademik

Effect of zinc ions on the sorption of hydrogen and the catalytic activity of palladium. Dokl. AN SSSR 153 no.1: 133-135 N '63. (MIRA 17:1)

1. Institut khimicheskikh nauk AN KazSSR. 2. AN KazSSR (for Sokol'skiy).

ACCESSION NR: AP4041403 S/0020/64/156/006/1386/1388

AUTHOR: Zakumbayeva, G. D.; Noskova, N. F.; Konayev, E. N. Sokol'skiy, D. V. (Academician AN KazSSSR)

TITLE: Liquid phase oxidation of carbon monoxide

SOURCE: AN SSSR. Doklady*, v. 156, no. 6, 1964, 1386-1388

TOPIC TAGS: carbon monoxide, liquid phase oxidation, palladous chloride catalyst, cupric chloride catalyst, bromide ion, iodide catalyst, acetate ion, catalyst activity, catalyst regeneration, catalyst life

ABSTRACT: The liquid phase oxidation of low concentrations (0.3-2%) of carbon monoxide in a circulating system at 20, 40 and 60C was investigated. The CO-containing gas was bubbled at 150-300 liters/hour through the catalyst solution at the bottom of the reactor. At 20C only 12% oxidation was attained using $PdCl_2$ or $CuCl_2$ in 0.02-0.1N HCl; this yield was lowered to 6% at 40C. With the addition of bromide or iodide ion oxidation was increased to 20% and was independent of temperature. A maximum oxidation of 35% was attained with $[Pd^{2+}] : [Cu^{2+}] = 0.22$, $[Cl^-] : [Br^-] = 0.2$ and 0.02N HCl.

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SOV/153-2-3-6/29

5(2), 5(4), 5(3)

AUTHORS: Zakumbayeva, G. D., Sokol'skiy, D. V.

TITLE: The Effect of Potassium Iodide on the Catalytic Hydrogenation of Some Organic Compounds

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1959, Vol 2, Nr 3, pp 340-344 (USSR)

ABSTRACT: At the beginning various results on investigations of the effect mentioned in the title are quoted (Refs 1-7). The following Soviet authors are mentioned: Aykazyan and Fedorova (Ref 4) and Pleskov (Ref 5). The hydrogenation process of various organic compounds was investigated on a skeleton nickel catalyst (0.3 g) with 20, 30, and 40° in 50 % ethyl alcohol. The solutions were 1N, 0.5N, 0.1N and 0.01 N of potassium iodide. The kinetic and potential curves of the hydrogenation were recorded, namely for the following substances: cyclohexene (Fig 1), allyl alcohol (Fig 2 and Table), mesityl oxide (Fig 3), and n-nitrophenol (Fig 4). The following was found: The iodide ion reduces the rate of hydrogenation of unsaturated compounds and displaces the potential of the catalyst to the negative values. The inhibiting effect of the iodide is stronger than

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that of the bromide; it still increases with the increasing dipole moment of the hydrogenated substance. The rate of hydrogenation depends on the fact to what degree the substance to be hydrogenated may reach the surface of the catalyst. There are 4 figures, 1 table, and 11 references, 10 of which are Soviet.

ASSOCIATION: Institut khimicheskikh nauk AN KazSSR i Kazakhskiy gosudarstvennyy universitet imeni S. M. Kirova - Kafedra kataliza i tekhnicheskoy khimii (Institute of Chemical Sciences AS KazSSR and Kazakh State University imeni S. M. Kirov - Chair of Catalysis and Technical Chemistry)

SUBMITTED: March 14, 1958

ZAKUMBAYEVA, G.D.; NOSKOVA, N.F.; KONAYEV, E.N.; SOKOL'SKIY, D.V., akademik

Liquid phase oxidation of carbon monoxide. Dokl. AN SSSR 156 no.6: 1386-1388 Je '64. (MIRA 17:8)

1. Akademiya nauk Kazakhskoy SSR (for Sokol'skiy).

ZAKUMBAYEVA, G.D.; ZAMARINA, N.A.; SOKOL'SKIY, D.V., akademik

Effect of chromium and nickel salts on the sorptive and catalytic properties of palladium black. Dokl. AN SSSR 160 no.4:829-832 F '65. (MIRA 18:2)

1. Institut khimicheskikh nauk AN KazSSR. 2. AN KazSSR (for Sokol'skiy).

SOKOL'SKIY, D.V.; ZAKUMBAYEVA, G.D.

Reduction of p-nitrophenol on a nickel skeletal catalyst in the presence of potassium chloride, bromide, and iodide. Trudy Inst. khim.nauk AN Kazakh.SSR 5:3-8 '59. (MIRA 13:6)
(Phenol) (Reduction)

ZAKUMBAYEVA, G.D.; SOKOL'SKIY, D.V.

Effect of alkali metal halides on the rate of hydrogenation of allyl alcohol. Trudy Inst.khim.nauk AN Kazakh.SSR 5:9-14 '59. (MIRA 13:6)

(Allyl Alcohol)
(Alkali metal halides)
(Hydrogenation)

SOKOL'SKIY, D.V.; ZAKUMBAYEVA, G.D.

Effect of alkali metal halides on the mechanism of hydrogenation of cyclohexene on platinum black. Izv.AN Kazakh.SSR.Ser.khim. no.1: 62-64 '59. (MIRA 13:6)

(Alkali metal halides)
(Hydrogenation)
(Cyclohexene)

ZAKUMBAYeVA, G. D., Cand Chem Sci -- (diss) "The effect of halides of basic metals on the adsorbtion and catalytic properties of Ni, Pt and Pd," Alma-Ata, 1960, 19 pp, 250 cop (Kazakh State U im S. M. Kirov) (KL, 43-60, 117)

ZAKUMBAYEVA, G. D.

PHASE I BOOK EXPLOITATION SOV/3537

Akademiya nauk Kazakhskoy SSR. Institut khimicheskikh nauk

Trudy, t. 5 (Transactions of the Institute of Chemical Sciences, Kazakh SSR, Academy of Sciences, Vol 5) Alma-Ata, Izd-vo Akademii nauk Kazakhskoy SSR, 1959. 154 p. 1,000 copies printed.

Ed.: N.D. Zhukova; Tech. Ed.: Z.P. Rorokina; Editorial Board of Series: D.V. Sokol'skiy (Resp. Ed.), V.G. Gutsalyuk, and B.V. Suvorov (Resp. Secretary).

PURPOSE: This collection of articles is intended for personnel of scientific research laboratories, laboratories of industrial enterprises, and faculty members of schools of higher education.

COVERAGE: The collection reviews problems of liquid-phase catalytic hydrogenation to upgrade and reactivate various products. Hydrogenation of unsaturated bonds of various types, adsorption of hydrogen on different catalysts, chromatographic separation of mixtures, and the effect of halogen salts of alkali metals on the rate of hydrogenation reactions promoted by various skeleton catalysts are described. Conditions of catalytic hydrogenation

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of natural fat, sunflower oil, and such synthetic products as esters of high-molecular fatty acids are set out. Dehydration of the butane fraction carried out in combination with isomerization is analyzed. Principles of selecting catalysts and regenerating them are reviewed and the formation of adsorption potentials on metal catalysts is explained. Each article presents conclusions drawn on the basis of experimental findings. References accompany most of the articles.

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ZAKUMBAYEVA, G.D. AND SOKOLSKY, D.V.

"Hydrogen adsorption and catalytic activity of platinum, nickel and palladium in the presence of anions and cations."

Report submitted to the Intl. Committee for Electrochemical thermodynamics and kinetics, Rome, Italy 24-29 Sep 1962

ZAKUMBAYEVA, G.D.; NOSKOVA, N.F.; KONAYEV, E.N.; SOKOL'SKIY, D.V., akademik

Low-temperature oxidation of carbon monoxide by aqueous solutions of palladium salts. Dokl. AN SSSR 159 no.6:1323-1325 D '64
(MIRA 18:1)

1. Institut khimicheskikh nauk AN KazSSR. 2. AN KazSSR (for Sokol'skiy).

ZAKARINA, N.A.; ZAKUMBAYEVA, G.D.; SOKOL'SKIY, D.V., Akademik

Selective hydrogenation of dimethylacetylenylcarbinol on Pd black in the presence of cadmium ions. Dokl. AN SSSR 162 no.4:814-816 Je '65. (MIRA 18:5)

1. Institut Khimicheskikh nauk AN KazSSR. 2. AN KazSSR (for Sokol'skiy).

5(4) SOV/20-124-4-42/67

AUTHORS: Sokol'skiy, D. V., Academician, AS Kazakhskaya SSR, Zakumbayeva, G. D.

TITLE: The Influence of the Halides of Alkali Metals Upon the Mechanism of the Catalytic Hydrogenation of Cyclohexene (Vliyaniye galoidov shchelochnykh metallov na mekhanizm kataliticheskogo gidrirovaniya tsiklogeksena)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 4, pp 880-882 (USSR)

ABSTRACT: The influence exercised by salts on the catalytic hydrogenation of solutions has hitherto been only very little investigated. The authors investigated the hydrogenation of cyclohexene on a skeleton-nickel-catalyst (0.3 g) in solutions of 0.01; 0.1; 0.5 and 1 n KCl, KBr and KJ in 50% ethyl alcohol at the temperatures of 20, 30, 40°. For comparison, experiments were also carried out with 50%-ethyl alcohol without any additions. The authors investigated the kinetics of hydrogen absorption and determined the potential of the pulverulent catalyst. A diagram shows the kinetic curves and the potential curves for the hydrogenation of cyclohexene in the presence of KCl at 20°. The rate of hydro-

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The Influence of the Halides of Alkali Metals Upon the Mechanism of the Catalytic Hydrogenation of Cyclohexene

genation decreases with increasing concentration of the KCl. Additions of KCl shift the potential of the catalyst towards the negative side. With increasing concentration, the rate of hydrogenation of the KCl decreases. The second diagram shows the kinetic curves and the potential curves for the hydrogenation of cyclohexene in the presence of KBr. The influence exercised by KCl and KBr is nearly the same in both cases, a certain difference becoming noticeable only in the case of the potential curves. The hydrogenation of cyclohexene in the presence of additions of KCl and KBr takes place at more negative potentials, and the rate of hydrogenation decreases accordingly. This is apparently due to the decreases of the adsorption of cyclohexene on the catalytic surface in the presence of additions. The activation energy of the hydrogenation of cyclohexene grows with increasing concentration of the admixtures from 2 to 6 kcal/mol. Additions of KJ reduce the rate of hydrogenation of cyclohexene still more. For the potential of the catalyst it holds that $Cl^- < Br^- < J^-$. The pH-value of the substances investigated was somewhat modified after the experiments. A

SOV/20-124-4-42/67

The Influence of the Halides of Alkali Metals Upon the Mechanism of the Catalytic Hydrogenation of Cyclohexene

potassium-cation is adsorbed in a KCl solution on the surface of the nickel catalyst, but in solutions of KBr and KJ an anion is adsorbed. For the binding energy of the adsorbed hydrogen it holds that $Cl^- < Br^- < J^-$. There are 3 figures, 1 table, and 6 references, 3 of which are Soviet.

ASSOCIATION: Institut khimicheskikh nauk Akademii nauk KazSSR (Institute of Chemical Sciences of the Academy of Sciences, Kazakhskaya SSR)

SUBMITTED: August 25, 1958

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SOV/76-33-11-36/47

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AUTHORS: Sokol'skiy, D. V., Zakumbayeva, G. D.

TITLE: The Influence of Potassium Bromide Additions on the Mechanism of the Catalytic Hydrogenation of Some Organic Compounds

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 11, pp 2579-2585 (USSR)

ABSTRACT: The influence of neutral electrolytes on the mechanism of catalytic hydrogenation has hitherto scarcely been investigated. Only recently Erdey-Gruz and Tsimmer (Ref 1), and Khosino and Miyata (Ref 2) carried out such investigations. The potentiometric method developed by D. V. Sokol'skiy and V. A. Druz' (Ref 3) makes possible to investigate the influence of the above-mentioned additions on the structure of the double-layer and on the concentration relation of the reacting substances on the surface of the pulverized catalysts. Additions of potassium bromide were investigated in the present case, since studies of A. N. Frumkin (Ref 4) showed that the bromine anion influences the reduction on the Pt - H_2 electrodes. The experiments were made on a skeleton nickel catalyst (0.3 g),

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The Influence of Potassium Bromide Additions on the Mechanism of the Catalytic Hydrogenation of Some Organic Compounds

cyclohexene, allyl alcohol, mesityl oxide, and p-nitrophenol being hydrogenated. 50%-ethanol and 0.01, 0.1, 0.5, and 1n-solutions of KBr in 50% ethanol at 20, 30, and 40° were used. The kinetic and potential curves obtained (Fig 1) show that with an increase in the concentration of the potassium bromide the adsorption of the cyclohexene on the surface of the catalyst decreases as well as the rate of hydrogenation. It is assumed that the bromine anion forms a film on the surface of the catalyst by which an additional potential barrier is formed which prevents the cyclohexene from entering into the reaction. Calculations of the activation energy (Table 1) show that the limiting stage of the cyclohexene hydrogenation on the skeleton nickel represents the activation of the cyclohexene, and that this activation is increased by the addition of KBr. The influence of additions of potassium bromide on the hydrogenation of allyl alcohol (Figs 2,3) is weaker than at cyclohexene, while with p-nitrophenol (Fig 5) the effect observed is similar to that with cyclohexene. The hydrogenation of mesityl oxide is accelerated by small additions of potassium bromide (0.01

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The Influence of Potassium Bromide Additions on the Mechanism of the Catalytic Hydrogenation of Some Organic Compounds

and 0.1n) (Fig 4), but inhibited by higher concentrations (0.5 and 1n), which fact is explained by an orientation of the dipoles. It is assumed that the more negative the dipole momentum of the substance is the worse is the hydrogenation in the presence of bromine ions. The hydrogenation of the mesityl oxide is also limited by the activation of the mesityl oxide (Table 2, activation energies). With respect to the amount of the adsorption the compounds investigated can be listed in the following order: cyclohexene < allyl alcohol < mesityl oxide < p-nitrophenol. There are 5 figures, 2 tables, and 8 Soviet references.

ASSOCIATION: Akademiya nauk KazSSR (Academy of Sciences of the KazSSR)

Card 3/3

ZAKUMBAYEVA, G.D.

Effect of the structure of a double layer on the adsorptive and catalystic properties of nickel and platinum. Trudy Inst.khim. nauk AN Kazakh.SSR 8:73-80 '62. (MIRA 15:12)
(Nickel catalysts) (Platinum catalysts) (Adsorption)

L 25157-65 EWT(m)/EWP(j)/EWP(t)/EWP(b) IJP(c) JD/JG/RM

ACCESSION NR: AP5001991 S/0020/64/159/006/1323/1325

AUTHOR: Zakumbayeva, G. D.; Noskova, N. F.; Sokol'skiy, D. V.; Konayev, E. N. (Academician AN KazSSR)

TITLE: Low temperature oxidation of carbon monoxide with aqueous solutions of palladium salts

SOURCE: AN SSSR. Doklady, v. 159, no. 6, 1964, 1323-1325

TOPIC TAGS: carbon monoxide oxidation, palladium containing catalyst, palladium copper iron catalyst, catalyst stability

ABSTRACT: Small amounts of CO (0.2-4%) can be essentially completely oxidized in one pass at low temperatures with aqueous solutions of a catalyst system containing Pd^{2+}-Cu^{2+}-Fe^{3+}. The oxidation proceeds via the formation and decomposition of the π complex $[PdX_2CO]^-$; the reduced Pd must be regenerated to Pd^{2+}. H_2O_2, $CrCl_3$, $K_2Cr_2O_7$, Cu^{2+} and Fe^{3+} were investigated as oxidizing agents in the aqueous Pd salt solutions; the most stable and active system contained $[Pd^{2+}]/[Cu^{2+}] = 0.22$; 0.5-1 g/l Fe^{3+} increased the activity, but 1.5-2.5

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L 25137-65
ACCESSION NR: AP5001991

g/l of Fe^{3+} retarded the CO oxidation process. Anion concentration also affected the process; optimum catalyst activity was attained with 3.5 g/l Cl^-, 20.6 g/l Br^- and 13-15 g/l CH_3COO^-. Increasing temperature from 20 to 40 C had little effect, and the gas feed rate had no effect on the catalyst activity. Complete reversibility of the $Cu^{2+} \rightleftharpoons Cu^+ + e$ redox system is necessary to maintain high catalytic activity. Several methods for possibly increasing catalyst stability were investigated. $K_2Cr_2O_7$ and $CrCl_3$ did not give desired results; high concentrations of oxidizing agents with high redox potentials (Fe^{3+}) interfered with reduction of the Pd complex. Catalyst stability was prolonged by the constant addition of 0.4% H_2O_2, but after several hours the activity fell due to the dilution of the catalyst solution. The stability of the catalyst was increased by a new method of regeneration (Abstractor's note: the method was not described) so the process could be operated continuously as long as desired. Orig. art. has: 3 figures.

ASSOCIATION: Institut khimicheskikh nauk Akademii nauk KazSSR (Institute of Chemical Sciences, Academy of Sciences, KazSSR)

SUBMITTED: 17Aug64 ENCL: 00 SUB CODE: GC
NR REF SOV: 005 OTHER: 005

Card 2/2

ZAKUMKIN, S.N.

Statistical generalized moment of V.K. Semenchenko, and the surface activity of metals. Zhur. neorg. khim. 5 no.8:1892-1893 Ag '60. (MIRA 13:9)

1. Kabardino-Balkarskiy gosudarstvennyy universitet.
(Metals) (Ions)

ZAKUPRA, V.A., Cand Tech Sci -- (diss) "Study of the wide neutral resin fraction of the semi-coking brown coal of the Aleksandriysk deposits of the UkSSR and products of its catalytic processing." Dnepropetrovsk, 1959. 14 pp; 1 sheet of tables (Min of Higher Education UkSSR. Dnepropetrovsk Chem-Tech Inst im F.E. Dzerzhinskiy). 150 copies (KL,38-58, 116)

L 19865-65 EWT(m)/EPF(c)/EWP(j) Pc-4/Pr-4 AEDC(b)/SSD/ESD/AFWL/APGC(b)/ESD(gs)/ESD(t) RM/MLK

ACCESSION NR AM5001004 BOOK EXPLOITATION 26 B S/

Sklyar, Vladimir Tikhonovich (Candidate of Chemical Sciences); Lebedev, YEvgraf Venediktovich (Candidate of Chemical Sciences); Zakupra, Vadim Aleksandrovich (Candidate of Technical Sciences)

Higher monoolefins (Vysshiye monoolefiny), Kiev, Izd-vo "Tekhnika", 1964, 281 p. illus., biblio. 1,800 copies printed.

TOPIC TAGS: higher monoolefin, chromotography, infrared spectroscopy, mass spectroscopy

PURPOSE AND COVERAGE: This book covers the problems of obtaining monoolefins with five and more carbon atoms and their use for alcohol synthesis, washing substances, plastics plasticizers, synthetic resins, oil additives, high quality special lubricants, etc. The methods of studying olefin-containing carbon mixtures, especially the methods of gas-liquid and liquid chromotography, inrared spectroscopy, mass spectroscopy, etc. are examined in detail. The book is intended for researchers, engineers, and technicians in the petrochemical and oil refining industries and can also be useful for students and graduate students specializing in petrochemical synthesis.

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L 41165-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD

ACCESSION NR: AP5007171 S/0286/65/000/003/0041/0041

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B

AUTHOR: Lebedev, Ye. V.; Sklyar, V. T.; Perekrest, A. N.; Gordash, Yu. T.; Zakupra, V. A.; Kal'chenko, V. M.; Gyul'misaryan, T. G.

TITLE: A method for producing highly aromatized material for making carbon black. Class 23, No. 167933

21

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 3, 1965, 41

TOPIC TAGS: carbon black, aromatic compound

ABSTRACT: This Author's Certificate introduces a method for producing highly aromatized material for the production of carbon black. The material is made from petroleum byproducts by using redistillation to isolate the hydrocarbon fraction which contains the aromatic compounds. This fraction is then extracted by furfural or phenol. In order to provide a wider choice of materials, coke distillate is used as the petroleum byproduct. The 240-460°C fraction is isolated from the distillate.

ASSOCIATION: none

Card 1/2

ZAKUPRA, V.A.; LEBEDEV, Ye.V.; MANZA, I.A.

Chromatographic analysis of the cracking and dehydrogenation products of paraffin hydrocarbons. Khim. i tekh. topl. i masel 10 no.2:28-34 F '65. (MIRA 18:8)

1. UkrNIIGIPRONEFT'.

DAL', V.I.; ZAKUPRA, V.A.; RUBAN, I.N.

Determining sulfur in coal products by the method of double combustion. Zav. lab. 24 no.12:1445-1446 '58. (MIRA 12:1)

1.Dnepropetrovskiy khimiko-tekhnologicheskiy institut.
(Sulfur--Analysis)

11(4) SOV/156-59-1-45/54

AUTHORS: Dal', V. I., Zakupra, V. A.

TITLE: The Chromatographic Investigation of the Benzine From the Catalytic Cracking of the Neutral Tar Share of the Semi-coking of the Aleksandriya Lignite of the UkrSSR (Khromatograficheskoye issledovaniye benzina kataliticheskogo krekinga neytral'noy chasti smoly polukoksovaniya aleksandriyskikh burykh ugley USSR)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya tekhnologiya, 1959, Nr 1, pp 173 - 176 (USSR)

ABSTRACT: The complete chromatographic separation of hydrocarbons necessitates the use of rather complicated high columns. A U-shaped column is proposed, in which the substance to be chromatographed moves downward in the first half, and upward in the second (Figure). The cracking product obtained on the metal reactor at 450° yielded 30.5% benzene (boiling point below 200°), 38.2% gas oil (boiling point above 200°), and 10.5% gas. The remaining 20.8% is made up of coke, moisture, and losses. Benzene was fractioned on silica gel ASK. Physical data and iodine number were determined in respect of the

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The Chromatographic Investigation of the Benzine From the Catalytic Cracking of the Neutral Tar Share of the Semi-coking of the Aleksandriya Lignite of the UkrSSR SOV/156-59-1-45/54

individual fractions (Table). The chromatograms presented show the separation into paraffin- and naphthene-hydrocarbons, olefines and aromatic hydrocarbons. The physical constants change accordingly. One table shows the compositions of the individual fractions from these hydrocarbon groups. A striking fact is the high aromatic hydrocarbon content (heavy benzol, xylenes). There are 3 figures, 2 tables, and 9 references, 8 of which are Soviet.

ASSOCIATION: Kafedra khimicheskoy tekhnologii topliva Dnepropetrovskogo khimiko-tekhnologicheskogo instituta im. F. E. Dzerzhinskogo (Chair of Chemical Technology of Fuels of the Dnepropetrovsk Institute of Chemical Technology imeni F. E. Dzerzhinskiy)

SUBMITTED: June 20, 1958

Card 2/2

DAL', V.I., doktor tekhn. nauk; ZAKUPRA, V.A., inzh.

Investigation of the composition of the tar of semicoked Aleksandrov brown coal and products of its catalytic cracking. Kompl. vyk. pal.-energ. res. Ukr. no.1:209-221 '59. (MIRA 16:7)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut im. Dzerzhinskogo.
(Coal tar) (Coal--Carbonization)

SKIYAd, Vladimir Tikhonovich, kand. khim. nauk; LEBEDEV, Yevgraf Venediktovich, kand. khim. nauk; ZAKUPRA, Vadim Aleksandrovich, kand. tekhn. nauk; KLIMENKO, A.P., kand. tekhn. nauk, retsenzent

[Higher monoolefins] Vysshie monoolefiny. Kyiv, Tekhnika, 1964. 281 p. (MIRA 17:9)

KLIMENKO, Aleksandr Petrovich, kand. tekhn. nauk; ZAKUPRA, V.A., kand. khim. nauk, retsenzent

[Separation of natural hydrocarbon gases] Razdelenie prirodnykh uglevodorodnykh gazov. Kiev, Tekhnika, 1964. 379 p. (MIRA 17:11)

ACCESSION NR: AP4043279 S/0065/64/000/008/0021/0026

AUTHOR: Zakupra, V. A.; Lebedev, Ye. V.; Manza, I. A.

TITLE: The effect of chemical treatment on the structure and adsorption property of silica gels with different trade marks

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 8, 1964, 21-26

TOPIC TAGS: silica gel, industrial silica gel, silica gel separation effectiveness, displacement chromatography, silica gel chemical treatment, hydrocarbon group separation, chromatographic hydrocarbon analysis

ABSTRACT: The effect of chemical treatment (with HCl and H_2O_2) of industrial silica gels ASM, KSM, ASK, and of silica gels with a given pore radius KSM-6, KSS-4, KSK-2, on the effectiveness of their separation of various synthetic mixtures of paraffinic, mono-olefinic, and aromatic hydrocarbons was studied by means of displacement chromatography. The use of displacement chromatography for analytical determination of the group composition of cracking or dehydrogenation products has made it possible to decrease the total volume of the

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ACCESSION NR: AP4043279

mixture to be studied as a result of a decrease in the volume of the desorption fraction used in identification. Thus, a decrease in the volume of the mixture to be analyzed decreases the consumption of silica gels. It is noted that this method is advantageous for a series of determinations, since the size of the apparatus dimensions and the time needed for analysis are also decreased. The characteristics of the individual hydrocarbon fractions separated are given in Table 1 of the Enclosure. To determine the effect of chemical treatment of silica gels on the effectiveness of separation of various hydrocarbon mixtures, silica gels with various porous structure (treated and untreated chemically) were used. It was found that the best properties for separating benzene, n-heptane and 2-heptene (mixture 1), and isopropyl benzene, n-octane, and 1-octene (mixture 2) were possessed by ASM, KSM, and KSS-4 silica gels which had been treated chemically. For separation of α-methylnaphthalene, n-hexadecane, and 1-hexadecene (mixture 3), the most effective agents were KSS-4 and ASK silica gels which also had been chemically treated. KSM-6 silica gel clearly showed the effect of chemical treatment, and its separation effectiveness for mixtures of 1 and 2 approached that of

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ACCESSION NR: AP4043279

ASM, KSM, and KSS-4. The activity determination of the silica gels used in the separation of benzene showed a decrease of 4 to 5 units for fine, porous silica gels which had been chemically treated. This decrease in activity is explained by a decrease in the specific surface on which the process of absorption of benzene depends. A sharper decrease in the specific surface (from 590 to 470 m^2/g) as a result of chemical treatment occurred in ASM silica gel. From the differential curve of the distribution of pore sizes or the effective radii of the silica gels used, it was concluded that the effective pore radius of chemically treated KSS-4 silica gel is 21 to 27 Å greater than that of the untreated gel. For ASM silica gel with a larger pore size, the change is characterized by an increase in the number of large pores. It was concluded that the separating ability of silica gels increases after chemical treatment, with the exception of KSK-2 silica gel, which consists of large pores and has decreased ability to separate mixtures of high-molecular particles. The most effective silica gel with medium pore size was KSS-4. Thus, it was established that chemical treatment leads to changes in the porous structure of silica gels by increasing the pore size and decreasing the specific surfaces. Orig. art. has: 5 figures and 2 tables.

Card 3/5

ACCESSION NR: AP4043279

ASSOCIATION: UkrNIIgiproneft'

SUBMITTED: 00 ATD PRESS: 3080 ENCL: 01

SUB CODE: MT, GC NO REF SOV: 007 OTHER: 003

Card 4/5

ACCESSION NR: AP4043279 ENCLOSURE: 01

Table 1. Characteristics of individual starting hydrocarbons

Compound	Boiling Point °C* (760 mm of Hg)	Refractive Index n_D	Density	Synthetic Mixture of Hydrocarbons % by volume	
Benzene	80.0—80.5	1.5010	0.8790	33.5	
n-Heptane	97.5—07.9	1.3875	0.6833	33.2	No. 1
2-Heptane	imported, not distilled	1.4094	0.7108	33.3	
Isopropyl benzene	149.9—151.7	1.4908	0.8635	33.4	
n-Octane	124.3—125.0	1.3972	0.7027	33.3	No. 2
1-Octene	imported, not distilled	1.4089	0.7150	33.3	
α-Methylnapthalene	68.9—70.3 (4 mm pm. cm.)	1.6148	1.0232	37.7	
n-Hexadecane	108.3—108.5 (3.5 mm pm. cm.)	1.4345	0.7740	31.3	No. 3
1-Hexadecene	imported, not distilled	1.4412	0.7811	31.0	

*Individual hydrocarbons were distilled in a fractionation column with an effectiveness of 20—22 theoretical plates

Card 5/5

SKLYAR, V.T.; LEBEDEV, Ye.V.; ZAKUPRA, V.A.

Dehydrocracking of paraffins over sulfide catalysts. Neftekhimiia 4 no.2:200-208 Mr-Ap'64 (MIRA 17:8)

Thermocatalytic [illegible]sion of paraffins over oxide catalysts. Ibid.:209-214

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut neftyanoy i neftechimicheskoy promyshlennosti "Ukrniigiproneft'", Kiyev.

ACCESSION NR: AP4032515 S/0204/64/004/002/0209/0214

AUTHOR: Sklyar, V. T.; Lebedev, Ye. V.; Zakupra, V. A.

TITLE: Thermocatalytic transformation of paraffins on oxide catalysts

SOURCE: Neftekhimiya, v. 4, no. 2, 1964, 209-214

TOPIC TAGS: paraffin dehydrocracking, olefin production, α olefin production, thermocatalytic cracking, oxide catalyst, MoO sub 3 NiO Al sub 2 O sub 3 catalyst, WO sub 3 NiO Al sub 2 O sub 3 catalyst, Cr sub 2 O sub 3 /Fe sub 2 O sub 3 catalyst, isomerization, disproportionation, aromatization, condensation, catalyst regeneration, economics, conversion rate

ABSTRACT: Liquid olefins were obtained in 35-45% yield from paraffins by dehydrocracking with oxide catalysts (MoO_3-NiO-Al_2O_3, WO_3-NiO-Al_2O_3, Cr_2O_3/Fe_2O_3) at temperatures of 550-590C. The paraffin crude, obtained from diesel oil by complexing with carbamide, typically contained 0.06% aromatics, and 40 wt.% C_{16} - C_{18} n-paraffins. At 550C increasing the feed rate reduced the yield; at 590C, the reverse obtains and high yields were obtained at a space velocity of 3 hours^{-1}. To obtain a relatively high α-olefin-containing product the conversion should be

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ACCESSION NR: AP4032515

limited to 30-40% at high temperatures and space velocities, simultaneously recirculating the unconverted portion of the crude and inert diluents. Side reactions such as isomerization, disproportionation of hydrogen, aromatization and condensation are more prevalent with these oxide than with sulfide catalysts. However, the former are cheaper and may be regenerated more easily. Orig. art. has: 1 table and 4 figures.

ASSOCIATION: Gosudarstvenny*y nauchno-issledovatel'skiy i proyektny*y institut neftyanoy i neftekhimicheskoy prosy*shlennosti "Ukrniigipronaft'" g. Kiyev. (State Scientific Research and Planning Institute of the Petroleum and Petrochemical Industry)

SUBMITTED: 24Apr63 ENCL: 00

SUB CODE: FP, OC NO REF SOV: 002 OTHER: 000

Card 2/2

5(2) SOV/32-24-12-11/45

AUTHORS: Dal', V. I., Zakupra, V. A., Ruban, I. N.

TITLE: Determination of Sulfur in Products of Carbon Treatment Using the Double Combustion Method (Opredeleniye sery v produktakh pererabotki uglya metodom dvoynogo sozhzheniya)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol 24, Nr 12, pp 1445-1446 (USSR)

ABSTRACT: The method of double combustion was suggested by Volynskiy and Chudakova (Ref 1). In the work reported here an iodine solution containing starch was used instead of the soda solution for adsorbing the SO_2 gas. The absorber was also modified (Figure), and among other changes the glass filter was replaced by a perforated plastic lamella. Instead of the gas burner a small electric furnace was used. The product of a catalytic cracking (over 200°), the neutral resinous fraction of semicoking (200-350°), a cracking fraction (200-300°), a Diesel oil, the resinous fraction of a catalytic cracking product (over 200°), concentrates of various aromatic hydrocarbons, and a coal tar were analyzed (Table). It was observed that with a sulfur con-

Card 1/2

Determination of Sulfur in Products of Carbon Treatment Using the Double Combustion Method

tent of more than 3% the titration of the SO_2 with iodine is more difficult. When this is the case the weighed sample taken must be smaller and the duration of the analysis must be lengthened. Using the iodine solution the analytic method is simplified and the analysis is carried out more quickly. There are 1 figure, 1 table, and 1 Soviet reference.

ASSOCIATION: Dnepropetrovskiy khimiko-tekhnologicheskiy institut (Dnepropetrovsk Chemical-Technological Institute)

ZAKUPRA, V.A., kand.tekhn.nauk

Apparatus for rapid chromatographic adsorption fractionation; two-stage chromato-graphic column. Nauch.zap.Ukrniiproekta no.4:141-149 '61. (MIRA 15:1)

(Chromatographic analysis) (Coal--Analysis)
(Petroleum--Analysis)

ZAKUPRA, V.A.; LEBEDEV, Ye.V.; MANZA, I.A.; Prinimala uchastiye SINYAKOVA, T.B.

Effect of chemical treatment on the structure and adsorption properties of various brands of silica gels. Khim. i tekh. topl i masel 9 no.8:21-26 Ag '64. (MIRA 17:10)

1. UkrNIIgiproneft'.

L 62095-65 EWT(1)/EEC-4/EWA(h) Pm-4/Pac-4/Peb/Pi-4/Pj-4
ACCESSION NR: AP5016729 UR/0286/65/000/010/0045/0045 36 B

AUTHORS: Golont, L. Ye.; Tumakova, R. N.; Gabyshev, V. G.; Zakurdayev, A. D.

TITLE: Device for coupling a drift resonator with magnified spatial interaction and a rectangular waveguide. Class 21, No. 171033

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 10, 1965, 45

TOPIC TAGS: waveguide coupler, resonator

ABSTRACT: This Author Certificate presents a device for coupling a drift resonator with magnified spatial interaction and a rectangular waveguide through a coupling window in the resonator wall. To insure the required amount of coupling, the device is in the form of a triangular metallic plate (see Fig. 1 on the Enclosure). Its wide side is connected to the wide wall of the rectangular waveguide, and the apex is connected to the delay system of the drift resonator. A rectangular groove is cut in the wide wall of the waveguide under the plate coupler. Orig. art. has: 1 diagram.

ASSOCIATION: Gosudarstvennyy komitet po elektronnoy tekhnike SSSR (State Committee for Electronic Technology, SSSR)

SUBMITTED: 18Apr64 ENCL: 01 SUB CODE: EC
NO REF SOV: 000 OTHER: 000
Card 1/2

L 62095-65
ACCESSION NR: AP5016729

ENCLOSURE: 01

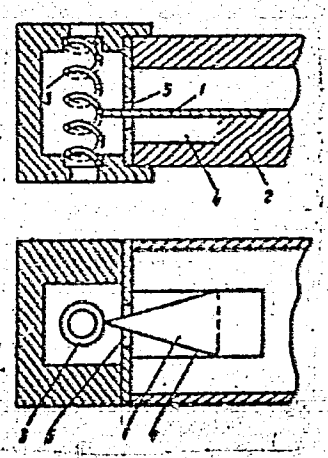

Fig. 1.
1- triangular metallic plate; 2- wide wall of waveguide; 3- delay system; 4- groove; 5- window

Card 2/2

LOMTATIDZE, G.A.; VEDERNIKOV, A.A.; Prinimali uchastiye: SHARONOV, G.Ye.; Inzh.; ZAKURDAYEV, A.G.; MOKROVA, V.P.; ROZHKOV, I.M.

Carbon oxidation during the finishing period of the oxygen blowing of an open-hearth furnace bath. [Sbor. trud.] TSNIICHM no.29: 65-72 '63. (MIRA 17:4)

AKINFIYEV, V.I.; ZAKURDAYEV, A.G.; SHARONOV, G.Ye.; SOROKIN, A.A.; CHEVELA, L.A.

Mechanism and the kinetics of processes taking place in the bath of a basic open-hearth furnace in scrap and hot metal practice. [Sbor. trud.] TSNIICHM no.29:73-102 '63. (MIRA 17:4)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (for Akinfiyev, Zakurdayev, Sharonov). 2. Dneprovskiy metallurgicheskiy zavod imeni Dzerzhinskogo (for Sorokin, Chevela).

ROZHKOV, I.M.; ZAKURDAYEV, A.G.

Determining the moment of the charge melting, the carbon content at the time of melting, and the metal temperature. Izv. vys. ucheb. zav.; chern. met. 6 no.11:42-46 '63. (MIRA 17:3)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.

GEKHTER, L.A.; ZAKURDAYEV, A.K.

Design of inductive pickups and measuring networks for them. Vop. gidr. no. 12:84-111 '63. (MIRA 17:5)

L 05901-67 EWP(j)/EWT(m) IJP(c) RM

ACC NR: AT6016343 (A) SOURCE CODE: UR/3183/65/000/001/0115/0120

AUTHOR: Birulya, A. K. (Doctor of technical sciences); Mikhovich, S. I. (Candidate of technical sciences); Zakurdayev, I. Ye. (Engineer)

26
25
B+1

ORG: None

TITLE: Automobile tire-to-road adhesion during the fall-winter period

SOURCE: Kharkov. Avtomobil'no-dorozhnyy institut. Avtomobil'nyy transport; mezhvedomstvennyy respublikanskiy nauchno-tekhnicheskiy sbornik, no. 1, 1965, 115-120

TOPIC TAGS: automobile industry, road, highway vehicle data, motor vehicle, adhesion

ABSTRACT: Automobile tire adhesion to road surface is characterized by an adhesion factor which has a significant effect on safe maximum automobile speed and determines the economic efficiency of vehicle transport. The adhesion factor is a function of surface type and degree of roughness, wear and condition. This factor is not constant for any period of time but varies from season to season and year to year depending on climatic conditions. It is highest during summer months and falls sharply in winter. The most dangerous period for travelling is fall and winter. The adhesion factor drops from summer to winter from 0.75 to 0.40. The minimum values for this factor have been determined for many regions of the SSSR and run from 0.4 to 0.6. The authors discuss a method developed at the Kharkov Automobile Highway Institute for de-

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L 05901-67

ACC NR: AT6016343

termining the adhesion factor. This method is based on braking distance measurements. An expression is given for calculating the longitudinal adhesion factor using this method. Experimental verification of the theoretical data was done on the KhADI Mobile Laboratory based on the GAZ-51 truck, using the M-20 automobile as the test vehicle. The results show that the adhesion factor is highest (0.8-0.9) in warm weather for a dry asphalt surface and decreases to 0.45-0.55 for wet or dirty surfaces. During winter months the adhesion factor is 0.20-0.25 for snow and 0.14-0.18 for ice. All of these data are for the same road section. The effect of air temperature on the adhesion factor is considered. The authors recommend that since the minimum safe adhesion factor is 0.4, the road service crews should systematically measure the existing factors for various roads and develop effective means for maintaining a factor which ensures safe travel. Orig. art. has: 2 tables, 3 formulas.

SUB CODE: 13/ 05/ SUBM DATE: None/ ORIG REF: 004

kh

Card 2/2

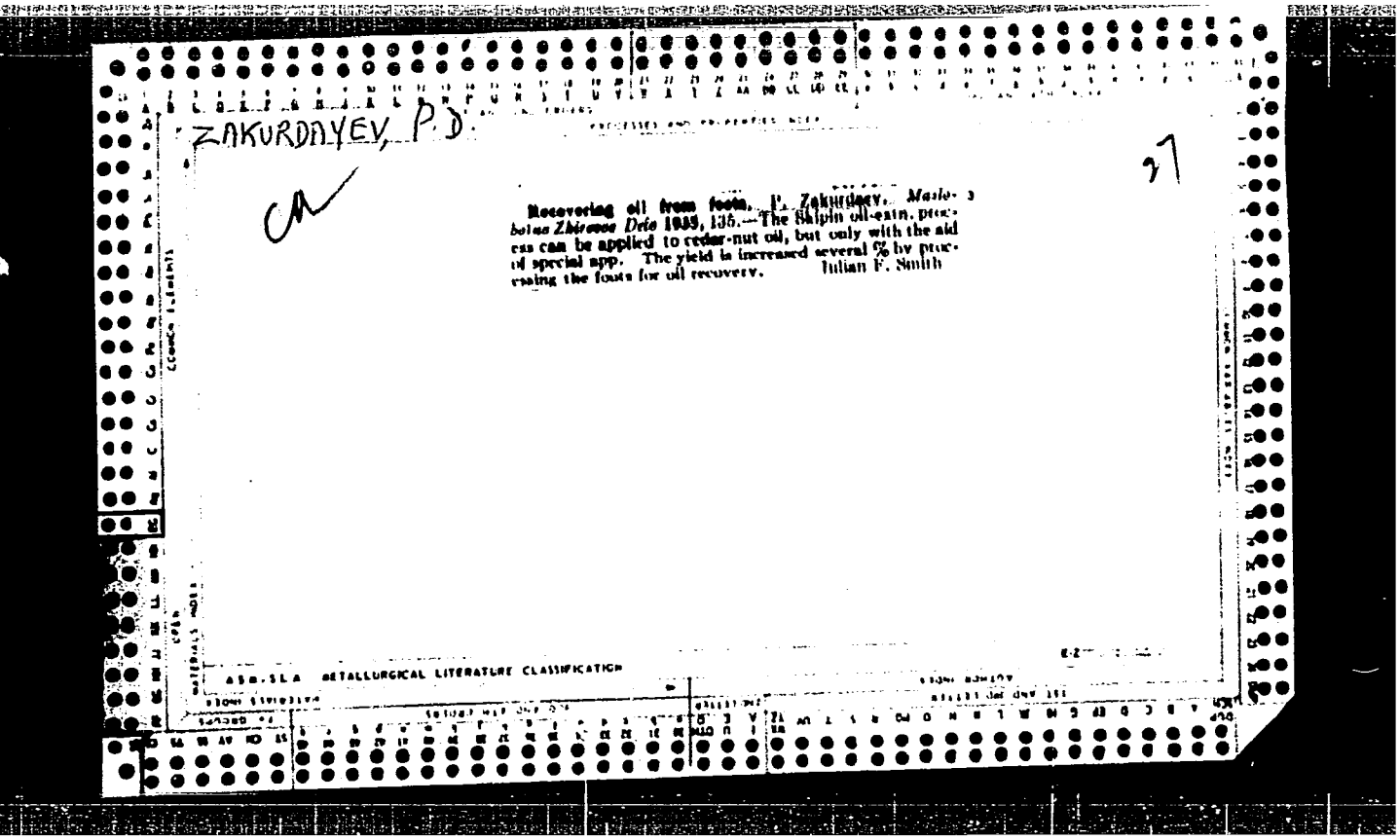
ZAKURDAYEV, Leonid Vasil'yevich; BOGATOVA, V.S., red.

[Motion-picture films, their characteristics and processing] Kinoplenki, ikh kharakteristiki i obrabotka. Moskva, Izd-vo "Iskusstvo," 1964. 109 p. (MIRA 17:7)

ZAKURDAYEV, M.

Patriotism and perseverance of Soviet seamen. Blok.agit.vod. transp. no.16:11-18 Ag '55. (MLRA 8:9)

1. Sekretar' partiynoy organizatsii tankera "Tuapse" (Formosa--Freedom of the seas)



ZAKURDAYEV, P.D.

27

Recovering oil from foots. P. Zakurdaev. *Maslo-bolno Zhirovoe Delo* 1939, 135.—The Skilpin oil-extn. process can be applied to cedar-nut oil, but only with the aid of special app. The yield is increased several % by processing the foots for oil recovery. Julian F. Smith

ASB.SLA METALLURGICAL LITERATURE CLASSIFICATION

ZAKURDAYEV, P. D. I MRYKHIN, N. I.

30370

Opyt raboty na nyetryeryvno dyeystvuyushchyey zustraktsionnoy ustanovkye s odnokratnym pryedvarit ye l'nym s'yemom masla. Pishch. Prom-st' SSSR, Vyp. 13, 1949, S. 27-31.

SO: Letopis' No. 34

ZAKURDAYEV, P.D.

Processing undecorticated cottonseed in a worm-type extraction unit.
Masl.-zhir.prom. 17 no.10:13-15 '52. (MLRA 10:9)

1. Kropotkinskiy masloekstraktsionnyy zavod.
(Cottonseed)

ZAKURDAYEV, P.D.

Standard oilseed storage. Masl.-zhir. prom. 23 no.3:9-10 '57.
(MLRA 10:4)

1. Kropotkinskiy maslookstraktsionnyy zavod.
(Oilseeds—Storage)

ZAKURDAYEV, P.D.

Use of chain grates. Masl.-zhir. prom. 23 no.5:31-32 '57. (MLRA 10:5)

1. Kropotkinskiy maslocekstraktsionnyy zavod.
(Furnaces--Grates)

ZAKURDAYEV, P.D.

Certain features of the storage of the raw sunflower seed oil.
Masl.-zhir.prom. 28 no.2:38-39 F '62. (MIRA 15:5)

1. Kropotkinskiy masloekstraktsionnyy zavod.
(Sunflower seed oil)

ZAKURDAYEV, V., inzh.

Testing of the KDP-4,0 mowing machine at high speeds. Trakt. i sel'khozmash. 32 no.7:21-22 Jl '62. (MIRA 15:7)

1. Kazakhskaya mashinoispytatel'naya stantsiya.
(Mowing machines—Testing)

PA - 2476

ZAKURDAYEVA, A.P.

AUTHOR by A.P. Zakurdayeva

TITLE Exhibition of Foreign Scientific and Technical Publications (Vystavka inostrannoy nauchnoy i naucho-tekhnicheskoy literatury, Russian)

PERIODICAL Vestnik Akademii Nauk SSSR 1957, Vol. 27, No. 1, p. 101 (USSR)

Received: 2 May 1957 Reviewed: 4 June 1957

ABSTRACT During the months of October and November 1956 the Academy of Sciences of the USSR organized an exhibition of foreign scientific and technical publications. This exhibition had been proposed by the British booksellers Collets Holdings Ltd., which exhibited books by 124 different British and American publishers. The exhibition showed books in English on physics, mathematics, astronomy, chemistry, biology, medicine, geology, geography, different branches of technology - electronics, aviation, metallurgy, energetics, transport, etc. - as well as on different topics from the fields of history, economics, and art. Different reference works, particularly from the field of technology, received particularly favorable comments. The exhibition was first shown in the House of Sciences in Moscow from 10 to 28 October, and then transferred to the House of Sciences in Leningrad. The exhibition was visited by over 15,000 scientists

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CARD 1/2

CARD 2

ZAKURDAYEV, N.F.; PETROVA, A.A.; BRONSHVAGER, V.S.; ERIDER, D.K.

Apparatus for studying the scattering of light in polymer solutions. Zav. lab. 30 no.11:1407-1408 '64. (MIRA 18:1)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.

ZAKURDAYEVA, N.P.; PODGORETSKIY, Ye.K.

Fractionation of cellulose triacetate. Khim. volok. no.6: 70-71 '64. (MIRA 18:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy kinofotoinstitut.

BESSMERTNYY, V.Ye.; BURDYGINA, V.S.; ZAKUBAYEVA, T.I.

Changes of some fertility elements in the takyrs under the effect of land improvement measures. Izv. AN Turk. SSR. Ser. biol. nauk no.1:29-33 '64. (MIRA 17:9)

1. Turkmenskiy nauchno-issledovatel'skiy institut zemledeliya.

ACCESSION NR: AR4023758 S/0274/64/000/001/A060/A060

SOURCE: RZh. Radiotekhnika i elektrosvyaz', Abs. 1A386

AUTHORS: Tereshchenko, A. I.; Zakurenko, O. Ye.

TITLE: Tuning a rectangular cavity by wall displacement

CITED SOURCE: Uch. zap. Khar'kovsk. un-t, v. 132, 1962, Tr. Radiofiz. fak., v. 7, 86-89

TOPIC TAGS: cavity, resonator, rectangular cavity, cavity tuning, variable dimension cavity, cavity Q variation, cavity tuning range

TRANSLATION: Results are presented of a theoretical investigation of the tuning of a rectangular resonator by varying one of its dimensions. It is shown that the greatest tuning range is attained for the simplest H_{101} mode. A family of tuning curves for the resonator and of the variation of its Q as functions of the ratio $\lambda/2a$,

Card 1/2

ACCESSION NR: AR4023758

where λ is the wavelength after deformation and a is the deformed dimension of the resonator, is presented. The results of the calculations lead to the following principal conclusions: 1. The initial rate of tuning relative to the dimension a increases with increasing ratio $\lambda/2a$. 2. The closer the initial ratio $\lambda_0/2a$ to unity, the larger the tuning range. 3. The relative change in Q increases with increasing initial value of $\lambda_0/2a$. 4. The absolute value of the initial Q_0 decreases linearly with increasing ratio $\lambda/2a$. The calculation results make it possible to solve practically all problems connected with the tuning of a cavity resonator by moving its wall (the attainment of maximum and minimum tuning rates, the attainment of a maximum tuning range for specified limits of variation of Q, etc.). O. N.

DATE ACQ: 03Mar64 SUB CODE: GE, SD ENCL: 00

Card 2/2

ACCESSION NR: AR4014769 S/0058/63/000/012/H018/H018

SOURCE: RZh. Fizika, Abs. 12Zh125

AUTHOR: Tereshchenko, A. I.; Korobkin, V. A.; Zakurenko, O. Ye.

TITLE: Tuning of H-section resonator by means of ferrite

CITED SOURCE: Uch. zap. Khar'kovsk. un-t, v. 132, 1962. Tr. Radiofiz. fak., v. 7, 78-85

TOPIC TAGS: H-section resonator, H-section cavity, ferrite tuning, field distribution, Q factor, critical wavelength, frequency variation, frequency tuning

TRANSLATION: Expressions for the Q and for the field distribution in a H-section resonator without ferrite were obtained by calculating the fields in the H-section waveguide. Perturbation theory with the use of the quasistatic approximation of the field inside the

Card 1/2

ACCESSION NR: AR4014769

ferrite was then used to obtain formulas for the frequency variation of an H-section or π-section resonator with a transversely-magnetized ferrite plate on the side wall. Plots of the frequency variation against the magnetic field are given for different transverse dimensions of the resonator. It is shown that the frequency variation depends strongly on the closeness of the resonant frequency λ_0 to λ_{cr}, which is the critical wavelength of a waveguide having the same transverse dimensions as the resonator; the deviation increases with the increasing ratio λ_0/λ_{cr}. An experimental test was made at a frequency of 3000 Mc with plates 1.5 and 3 mm thick. The experimental data coincide with the calculated ones. Ye. Lebedeva.

DATE ACQ: 24Jan64 SUB CODE: PH, GE ENCL: 00

Card 2/2

L 10051-63
BDS
ACCESSION NR: AR3000390 S/0058/63/000/004/H025/H025

49

SOURCE: RZh. Fizika, Abs. 4Zh149

AUTHOR: Korobkin, V. A.; Tereshchenko, A. I.; Zakurenko, O. Ye.

TITLE: Retuning of a resonator of cruciform cross section with the aid of a ferrite plate located on the side wall

CITED SOURCE: Uch. zap. Khar'kovsk. u-t, v. 121, 1962, Tr. Radiofiz. fak., no. 5, 49-55

TOPIC TAGS: microwave cavities, cruciform section, tuning range, ferrite slug

TRANSLATION: Calculations are presented for the retuning of a waveguide cavity with cruciform cross section by means of a ferrite plate located on the side wall. The calculation is by the perturbation method assuming a quasi-static internal field in the ferrite. It follows from the calculations that the amount of retuning is proportional to the ratio of the resonant wavelength to the critical wavelength, i.e., it is the larger, the higher the ledge. Therefore a cavity

Card 1/2

L 10051-63

ACCESSION NR: AR3000390 0

with cruciform transverse cross section should have a large tuning range compared with a rectangular cavity. To check on the calculations, the retuning of a rectangular and cruciform resonator with identical resonant frequency was checked experimentally. The increased tuning range of the cruciform cavity, as compared with the rectangular one, was found to be somewhat less than given by the calculations. Ye. Lebedeva

DATE ACQ: 14May63 ENCL: 00 SUB CODE: PH,SD

cs/ja
Card 2/2

ZAKURENOV, V. M., Cand Of Phys-Math-Sci ---(diss) "Investigation of the Temperature-Frequency Absorption of Ultrasonic Waves in the Esthers of Formic Acid by the Pulse Method,"

Moscow, 1959, 12 pp (Moscow Oblast Pedagogical Institute imeni N. K. Krupskaya)

(KL, 6-60, 120)

ZAKIRENOV, V.M.

PHASE I BOOK EXPLOITATION SOV/5644

Vsesoyuznaya konferentsiya professorov i prepodavateley pedagogicheskikh institutov

Primeneniye ul' traakustiki k issledovaniyu veshchestva. vyp. 10. (Utilization of Ultrasonics for the Investigation of Materials. no. 10) Moscow, Izd-vo MOPI, 1960. 321 p. 1000 copies printed.

Eds.: V. F. Nozdrev, Professor, and B. B. Kudryavtsev, Professor.

PURPOSE: This book is intended for physicists and engineers interested in ultrasonic engineering.

COVERAGE: The collection of articles reviews present-day research in the application of ultrasound in medicine, chemistry, physics, metallurgy, ceramics, petroleum and mining engineering, defectoscopy, and other fields. No personalities are mentioned. References accompany individual articles.

Card 1/10

S/058/61/000/010/098/100
A001/A101

AUTHOR: Zakurenov, V.M.

TITLE: Investigation of propagation velocity of ultrasonic waves in formiates by the pulse method on the basis of the saturation line

PERIODICAL: Referativnyy zhurnal. Fizika, no. 10, 1961, 336, abstract 10Zh452 ("Uch. zap. Mosk. obl. ped. in-ta", 1960, v. 92, 185 - 198)

TEXT: The sound velocity was measured at temperatures from -40 to +260°C in butyl- (I) and propyl formiates (II). Velocity decreases linearly: $\Delta c/c_0 \Delta t = -0.00304$ degree^{-1} for (I) and -0.00301 degree^{-1} for (II), where c_0 is velocity at 0°C. Experimental data for different formiates were compared on the basis of the law of corresponding states. The Raoult law was checked; it does not hold in the critical region. Coefficient of adiabatic compressibility has been determined. Heat capacities c_p and c_v of propyl formiate are approximately determined; at the critical point c_v is finite, but c_p tends to infinity.

L. Zarembo

[Abstracter's note: Complete translation]

Card 1/1

24.1900

30504
S/194/61/000/008/054/092
D201/D304

AUTHOR: Zakurenov, V.M.

TITLE: The saturation line pulse method of studying the velocity of propagation of ultrasonic waves in complex ester formates

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 8, 1961, 8-9, abstract 8 E63 (Uch. zap. Mosk. obl. ped. in-ta, 1960, 92, 185-198)

TEXT: The velocity of propagation of ultrasound was studied in propyl formate (PF) and butyl formate (BF) at temperatures from -40 to +260°C and at frequencies 5-12 mc/s. The velocity decreases linearly with increasing temperature, the slope of the line for PF and BF being 0.00301 and 0.00304 respectively multiplied by the respective velocities at 0°C. This principle of conformal states was checked for PF, BF, methyl and ethyl formate which agrees within 5-10% for all respective temperatures. It was shown experi-

Card 1/3

The saturation line...

mentally that for the first four homologues of the formate series, the principle of conformal states is satisfied for adiabatic compressibility and stiffness; it has been established that the dependence of velocity on the respective density of several ester formates is expressed by approximately a single curve. Reasons are given for the possible deviations from the principles of conformal states. It has been established that the coefficient of adiabatic compressibility increases exponentially with temperature. At constant temperature the adiabatic compressibility decreases with increasing molecular weight. The Bekker-Nozdrev and Raoult's laws and the Lagemann ratio have been confirmed experimentally. It is shown that Raoult's rule satisfies the principle of conformal states, while the Lagemann ratio for fluids of one homologous series only, satisfies this principle in approximation only (with an accuracy of 19%), the accuracy being increased for liquids near their critical temperatures. In the study of US velocities by the saturation line method in PF near the critical temperature, a dependence in temperature has been established of specific thermal capacities at constant pressure

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The saturation line...

and volume. Their ratio has also been calculated at critical points for the liquid PF phase. The results obtained are in qualitative agreement with those of other authors. 9 figures. 2 tables. 17 references. [Abstracter's note: Complete translation]

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SOV/19-58-6-65/695

AUTHORS: Borisenko, I.V., Buletov, M.V., Vragov, Yu.D., Safronovich, A.A., Novitskiy, G.S., Ryabtsev, A.N., Zakusilo, V.I., Tokarev, Yu.P., Sukach, P.Ye.

TITLE: A Machine-Tool for Producing Hoops (Stanok dlya izgotovleniya obruchey)

PERIODICAL: Byulleten' izobreteniy, 1959, Nr 6, p 18 (USSR)

ABSTRACT: Class 7c, 33. Nr 113528 (582918 of 7 Sep 1957). Submitted to the Committee for Inventions and Discoveries at the Ministers Council of USSR. A machine consisting of a drum, rolls, and a crank press; in order to produce corrugated hoops the drum is connected to the rollers for mechanically feeding the strip from the coil; the rollers are provided with an inbuilt device for twisting strip into a spiral; a shaft for automatic feed of strip to the press, and dies for hoop ends is also included.

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SOV/19-59-6-72/695

A Method of Obtaining Artificial Shoe Leather for the Uppers of Footwear

as deep or deeper than the thickness of the coating film, and in the second case - by coating the plate with the film material only up to the upper edge of the flanges (projections).

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